Hyla *VOL. 2014., No. 1, Str. 13 - 17*
ISSN: 1848-2007

Short note
Urošević 2014

Record of a melanistic Dalmatian Algyroides, *Algyroides nigropunctatus* (Duméril & Bibron 1839) (Squamata, Lacertidae), on the Island of Corfu, Greece

Nalaz melanističnog mrkog guštera, *Algyroides nigropunctatus* (Duméril & Bibron 1839) (Squamata, Lacertidae), na otoku Krfu, Grčka

ALEKSANDAR UROŠEVIĆ

University of Belgrade, Institute for Biological Research "Siniša Stanković", Bulevar despota Stefana 142, 11000 Belgrade, Serbia, aurosevic@ibiss.bg.ac.rs

Serbian herpetological society "Milutin Radovanović", Bulevar despota Stefana 142, 11000 Belgrade, Serbia, acaurosevic@gmail.com

Abstract

In this short note, the author presents a record of a melanistic juvenile Dalmatian Algyroides (*Algyroides nigropunctatus*) in the village of Dassia on the Greek island of Corfu, with the *in situ* voucher photos. According to the existing literature, melanistic specimens of the Dalmatian Algyroides were recorded only in the north of the species' range – on the island of Krk (Croatia) and in the village of Dragonja (Slovenia). This is one of the rare reported cases of melanism in Dalmatian Algyroides, and the first record of melanism in the southern part of this species' distribution range.

***Key words*:** Melanism, Lacertidae, *Algyroides nigropunctatus*, Corfu

Sažetak

U ovom kratkom priopćenju autor prezentuje nalaz melanističnog mladunca mrkog guštera (*Algyroides nigropunctatus*) u naselju Dassia na grčkom otoku Krfu, uz prilog dokaznih fotografija *in situ.* Prema dosadašnjoj literaturi, melanični primjerci mrkog guštera zabilježeni su samo na sjeveru rasprostranjenja ove vrste – na otoku Krku (Hrvatska) i u naselju Dragonja (Slovenija). Ovo je jedan od rijetkih zabilježenih nalaza melanizma kod mrkog guštera, i prvi nalaz melanizma na jugu rasprostranjenja ove vrste.

***Ključne riječi*:** Melanizam, Lacertidae, *Algyroides nigropunctatus*, Krf

The Dalmatian Algyroides *Algyroides nigropunctatus* (Duméril & Bibron 1839) is a small lacertid lizard with snout-vent length up to 70mm and tail about twice as long. Males are larger than females. It is easily distinguished from other small lacertids by the rough appearance of the dorsal scales, which are large, blunt and strongly keeled (Arnold & Ovenden 2002). Its range is restricted to coastal areas of the Adriatic and Ionian sea, from the easternmost coastal parts of Italy and western Slovenia in the north to the Gulf of Corinth in the south, including some Dalmatian and Ionian islands (Radovanović 1951, Džukić 1970, Džukić & Pasuljević 1979, Arnold & Ovenden 2002, Chondropoulos 2004). Although this species is associated with the Mediterranean climate, it can penetrate into the Balkan hinterland along river valleys, reaching areas as far as 170km from the nearest sea coast (Džukić & Pasuljević 1979, Chondropoulos 2004). It is considered an endemic species for the Balkan peninsula (Džukić & Kalezić 2004). Dalmatian Algyroides was pointed out as the most common reptile species on Corfu (Tóth et al. 2002).

The normal colouration for this species is rather sombre, dark-grey to reddish-brown above, with scattered black spots. In some areas juveniles tend to be darker than adults, dark brown or grey above, without dark spots. The belly is greyish, whitish or yellowish in juveniles and females and orange to red, with colour often extending on flanks, in males. Adult males also have an intense blue throat and eye (Radovanović 1951, Arnold & Ovenden 2002, Glandt 2010). The rare cases of melanism for this species have been noted in the northern parts of its range. On the island of Krk, Croatia, large population almost entirely composed of sooty-black individuals was observed during the March of 1938 (Radovanović 1951). The melanistic individual of this species was also reported in Slovenia, near the village of Dragonja (Jagar & Ostanek 2011).

A melanistic *A. nigropunctatus* juvenile was observed on the 28. August 2013 in the village of Dassia near the main road on the Corfu island, Greece (8m a.s.l., 39°41'24.49" N, 19°50'17.25" E). It was photographed *in situ* several times in the anthropogenic habitat - decorative rocks in the garden, which was vegetated by low grass, decorative plants and lemon trees. The animal was uniformly black with a bluish tinge, with light bluish-grey ventral side of the tail (Fig. 1). This colouration is a typical example of melanism in this species (Jagar & Ostanek 2011) as well as for lacertids in general (Arnold et al. 2007). In the same habitat, large number of normally coloured *A. nigropunctatus* juveniles as well as few adults could be observed (Fig. 2). Other lizard species observed during that day and evening in the close vicinity of the site, on different microhabitats, were *Hemidactylus turcicus* (Linnaeus 1758), *Ablepharus kitaibelii* (Bibron & Bory de Saint-Vincent 1833), *Anguis graeca* (Bedriaga 1881) and *Podarcis tauricus* (Pallas 1814).

Melanism sporadically occurs in lacertid lizards (Arnold & Ovenden 2002). It is noted as quite common in *Dalmatolacerta* on high altitudes (Arnold et al. 2007) and in *Podarcis* on small islands, where entire populations can be melanistic (Radovanović 1951, Arnold et al. 2007). Melanism often occurs in various *Zootoca vivipara* populations (Cavin 1993, Gvoždík 1999, San-Joze et al. 2008, Jambrich & Jandzik 2012). All-black individuals are also frequently reported for *Lacerta agilis* (Cavin 1993, Krecsák & Hartel 2001, Arnold & Ovenden 2002) and *Podarcis muralis* (Zuffi 1986, Tosini et al. 1991, Sound 1994, Trócsányi & Korsós 2004).

Melanism in lacertid lizards could be related to mutations in the *Mc1r* gene (Nunes et al. 2011, but see also Buades et al. 2013). It is thought to have adaptive significance related to thermal ecology (Tosini et al. 1991), especially on the high altitudes or small islands. However, melanistic lizards can be exposed to the increased risk of predation, due to the lack of camouflage (Cavin 1993, Gvoždík 1999). According to the available literature, the case of melanistic *A. nigropunctatus* on Corfu is one of the rare cases of melanism in this species, and the first report of melanism in the southern part of this species' distribution range.

ACKNOWLEDGEMENTS

I would like to thank the two anonymous reviewers for the constructive review, Jelena Pavlović for help in the field and Ljiljana Tomović for helpful suggestions. Realization of this short note was partly funded by the Serbian Ministry of Education, Science and Technological Development grant no. 173043.

REFERENCES

Arnold, N. & Ovenden, D. (2002): A field guide to the reptiles and amphibians of Britain and Europe, Harper Collins Publishers, London, United Kingdom.

Arnold, E.N., Arribas, O. & Carranza, S. (2007): Systematic of the Palaearctic and Oriental lizard tribe Lacertini (Squamata: Lacertidae: Lacertinae), with descriptions of eight new genera. Zootaxa 1430: 1-86.

Buades, J.M., Rodríguez, V., Terrasa, B., Pérez-Mellado, V., Brown, R.P., Castro, J.A., Picornell, A. & Ramon, M.M. (2013): Variability of the *mc1r* Gene in Melanic and Non-Melanic *Podarcis lilfordi* and *Podarcis pityusensis* from the Balearic Archipelago. PLOS1 8(1): e53088.

Cavin, L. **(**1993**):** Obsérvations d'individus m**é**laniques chez le lézard vivipare (*Lacerta vivipara* Jacquin, 1787) et le lézard des souches (*Lacerta agilis* Linne 1758). Bulletin de la Société Herpétologique de France 65-66: 76-78.

Chondropoulos, B.P. (2004): *Algyroides nigropunctatus*. pp. 224-225. In Gasc, J.-P., Cabela, A., Crnobrnja-Isailović, J., Dolmen, D., Grossenbacher, K., Haffner, P., Lescure, J., Martens, H., Martínez Rica, J.P., Maurin, H., Oliveira, M., Sofianidou, T.S., Veith, M., Zuidrewijk, A. (eds.). Atlas of Amphibians and Reptiles in Europe. Reedition. Museum National d' Histoire Naturelle, Paris.

Džukić, G. (1970): Beitrag zur Kenntnis der Verbreitung der *Algyroides nigropunctatus* Duméril et Bibron in Jugoslawien. Fragmenta Balcanica 7(16): 49-155.

Džukić, G. & Pasuljević, G. (1979): O rasprostranjenju ljuskavog gustera *Algyroides nigropunctatus* (Duméril et Bibron, 1839) (Reptilia, Lacertidae).[On the distribution of keeled lizard *Algyroides nigropunctatus* (Duméril et Bibron, 1839) (Reptilia, Lacertidae)]. Biosistematika 5(1): 61-70.

Džukić, G. & Kalezić, M.L. (2004): The Biodiversity of Amphibians and Reptiles in the Balkan Peninsula. pp. 167 – 192. In Griffiths, H.I, Kryštufek, B., Reed, J.M. (eds.). Balkan Biodiversity: Pattern and Process in the European Hotspot. Kluwer Academic Publishers, Dordrecht, The Netherlands.

Glandt, D. (2010): Taschenlexikon der Amphibien und Reptilien Europas. Alle Arten von den Kanarischen Inseln bis zum Ural. Quelle & Meyer Verlag, Wiebelsheim.

Gvoždík, L. (1999): Colour polymorphism in a population of the common lizard, *Zootoca vivipara* (Squamata: Lacertidae). Folia Zoologica 48: 131-136.

Jagar, T. & Ostanek, E. (2011): First record of a melanistic Dalmatian Algyroides (*Algyroides nigropunctatus*) in Slovenia. Natura Sloveniae 13(1): 61-62.

Jambrich, A. & Jandzik, D. (2012): Melanism in the topotypic population of the Pannonian subspecies of the common lizard, *Zootoca vivipara pannonica* (Reptilia: Lacertidae). Herpetology Notes 5: 219-221.

Krecsák, L. & Hartel, T. (2001): Fekete színű fürge gyík a Szent Annató környékér Ől [A black specimen of the sand lizard from the region of St. Anna Lake]. Terrárium 3(3): 12-23.

Nunes, V.L., Miraldo, A., BEAUMONT, M.A., BUTLIN, R.K. & PAULO, O.S. (2011): Association of *Mc1r* variants with ecologically relevant phenotypes in the European ocellated lizard, *Lacerta lepida*. Journal of Evolutionary Biology 24: 2289–2298.

Radovanović, M. (1951): Vodozemci i gmizavci naše zemlje. Naučna knjiga, Beograd.

San-JosÉ, L.M., GonzÁlez-Jimena, V. & Fitze, P.S. (2008): Frequency and phenotypic differences of melanistic and normally colored common lizards, *Lacerta* (*Zootoca*) *vivipara* of the southern Pyrenees (Spain). Herpetological Review 39(4): 422-425.

Sound, P. (1994): Fund eines vollmelanistischen Exemplars der Mauereidechse (*Podarcis muralis*) im Mittelrheintal. Salamandra 30(3): 221-222.

Tosini, G., Lanza, B. & Bacci, M. (1991): Skin reflectance and energy input of melanic and non-melanic populations of wall lizard (*Podarcis muralis*). pp. 443-448. In Korsós, Z. & Kiss, I. (eds.). Proceedings of the Sixth Ordinary General Meeting, Budapest (SEH–HNHM).

Tóth, T., Krecsák, L., Madsen, T. & Újvári, B. (2002): Herpetofaunal locality records on the Greek Island of Corfu (Amphibia, Reptilia). Herpetozoa 15(3/4): 149-169.

Trócsányi, B. & Korsós, Z. (2004): Recurring melanism in a population of the common wall lizard: numbers and phenotypes. Salamandra 40(1): 81-90.

Zuffi, M. (1986): Su *Podarcis muralis maculiventris* (Werner, 1891) melanica in risaia a Bereguardo (Pavia). Atti della Societa Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano 127 (3-4): 293-296.

Figure 1. The melanistic *A. nigropunctatus* juvenile. Characteristic dorsal scales and lighter coloured ventral side of the tail are visible.

Slika 1. Melanistični mladunac *A. nigropunctatus.* Vidljive su karakteristične dorzalne ljuske i svjetlije obojena ventralna strana repa.

Figure 2. Normally coloured *A. nigropunctatus* juvenile from the same locality.

Slika 2. Normalno obojen mladunac *A. nigropunctatus* sa istog lokaliteta.